

Site: Syntex - Verona	(415) 855-5166
ID #: M0D007452154	
Break: 17.8	
Other: Spring River	
Sampling: 0751	
LEWIS J. THROOP, Ph.D. DIRECTOR	
ANALYTICAL AND ENVIRONMENTAL RESEARCH	

12-16-85

December 16, 1985

AER: 6925

Mr. Ronald L. Crunkilton
Water Quality Research Biologist
Missouri Department of Conservation
Fish and Wildlife Research Center
1110 College Avenue
Columbia, Missouri 65201



40035643
SUPERFUND RECORDS

Dear Mr. Crunkilton:

Following your letter of October 9, 1985, I requested Dr. Robertson of our laboratory to carry out the recalculation of whole fish TCDD concentration on the 1984 Spring River fish samples. As you recall, there was some confusion regarding the sample designations and as a result, we did not have the necessary weight information to allow us to calculate the "whole fish" TCDD concentrations. Your recommendation to use an average value of 15% of body weight for the fillet portion was therefore applied in calculating these "whole fish" values. The results of these recalculations along with a copy of the original "Table-2" of the 1984 report are contained in the attached memo from Dr. Robertson.

I would also like to mention that Dr. Gross had expressed his concern with the time involved with tissue preparation of the fillet and remainder portions of fish. He has no facilities on site to do this homogenization and has been sending an assistant to a local fish market to carry out this preparation step and adding this cost to his bill to Syntex. Since it is stated in the Spring River Fish and Sediment Plan (pg. 3-4) that the samples will be "weighed, homogenized and then frozen and stored by MDC prior to their shipment by EPA to an appropriate analytical laboratory designated by Syntex", I would like to see if we could follow that protocol. I believe that such a procedure will reduce the confusion which we have had in establishing the exact representation of each sample. If it is impossible to arrange for sample preparation in Missouri, please call and I will try to arrange to have our laboratory here in Palo Alto set up to do the homogenization and forward the samples to Dr. Gross. This does present an additional handling step, however, and the attendant risk of mix-up.

107-25A-

Mr. Ronald Crunkilton
December 16, 1985
Page 2

We have received a verbal report of this year's results from Dr. Gross and expect the written report in a few days. We will review the data and forward it to MDC and EPA Region VII as quickly as possible.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Lewis Throop".

Lewis Throop
Director,
Analytical and Environmental Research

sp/0104y

encl.

cc: K.S. Richey (w/encl.)

**SYNTEX RESEARCH
ANALYTICAL AND
ENVIRONMENTAL RESEARCH
PALO ALTO, CA 94304**

MEMORANDUM

MEMO TO: L. Throop

AER: 6735
October 21, 1985

CC:

FROM: D. Robertson

D.R.

SUBJECT: Calculation of TCDD Content in Whole Fish From the
Spring River

In a previous memorandum (AR: 6481, October 1, 1985), I described the problems in computing whole fish TCDD values which arose from the lack of data for weights of fillets and remnants of fish taken from the Spring River in 1984. In response to that memorandum, Mr. Crunkilton of the Missouri Department of Conservation has suggested a value of 15% for the average yield of fillets to be used to recalculate the analyses for whole fish.

The TCDD content of whole fish was recalculated for the attached table assuming the 15% yield and the original data of Dr. Gross' report of January 8, 1985. Table 2 from that report is included here for convenient reference.

2,3,7,8-TCDD in Whole Fish Calculated
Assuming a Weight/Weight Percentage
for Fillets of 15%

<u>Sample ID</u>	<u>Concentration of 2,3,7,8-TCDD (ppt)</u>
Location 1 Group B, BAC 402	26
Location 2 Group B, BAC 403	34 22*
Location 3 Group B, BAC 414	12
Location 4 Group B, BAC 417	11
Location 5 Group B, BAC 418	3

* Repeat Analysis

sp/drsr1021.035

Table 2. Analysis of Whole Fish for 2,3,7,8-TCDD by Capillary Column GC/HRMS

Sample ID	Weight	Concentration of 2,3,7,8-TCDD (ppt)	Detection Limit (ppt)	Percent Recovery	320/322 Isotope Ratio
Location 1					
9pB, BAC #402	30.29	40	2	75	.74
9pC, BAC #402	31.47	30	2	60	.91 ¹
Location 2					
9pB, BAC #403	37.01	40 25*	3 2*	100+ 65	.81 .68
Location 3					
9pB, BAC #405	33.15	13	2	80	.60 ¹
Location 4					
9pB, BAC #417	38.85	12	3	60	.84
Location 5					
9pB, BAC #418	37.25	3 3*	1 1*	90	.84

* = repeat analysis

¹ See explanation on pages 9 and 10 under comments.